1. IDENTIFICATION OF THE PRODUCT AND OF THE COMPANY/UNDERTAKING

Product name:	BRAKE PAD ASSEMBLY FOR MOTOR VEHICLES
Product code:	**CEN 105 15AA9101 FG A16**
Product Use Description:	This non-asbestos friction material is a multi-ingredient with system resins and rubber as a binding agent in a cured and vulcanized form. There is no hazard when using the production correctly.

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance

Solid disc brake pad and dark gray to black in color.

Potential Health Effects

Skin contact

May cause mild skin irritation after contacting the powder constituents

Eye contact

May cause mild eye irritation after contacting the powder constituents

Inhalation

Not available

Ingestion

Not available

Symptoms

No data

Carcinogenicity

This material is not listed as a carcinogenicity by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), or the Occupational Safety and Health Administration (OSHA).

3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Components	CAS-No.	Concentration
Barium sulphate	7727-43-7	12-14 %
Graphite	7782-42-5	8-12 %
Cashew dust	68602-89-1	4-6 %
copper	7440-50-8	3-4.5 %
Antimony sulfide	1345-04-6	2-4 %
Calcium hydroxide	1305-62-0	2-5 %
Mica	12001-26-2	2-4 %
Potassium titanium	39290-90-9	15-18 %
Tire dust	139497-04-4	2-4 %

4. FIRST- AID MEASURES

Skin

After contact with powder constituents, wash off thoroughly with water.

Eyes

After contact with powder constituents, rinse with water thoroughly

Inhalation

Not dangerous under normal use conditions

Ingestion

Not available

Additional Information

Use NIOSH-approved respirator if exposure to dust in concentrations exceeding PEL's or TLV's is possible.

5. FIRST- FIGHTING MEASURES

Suitable Extinguishing media

Water spray, Foam, ABC-powder, Carbon dioxide (CO_2).

Hazardous combustion products

The product is stable under normal ambient temperature and pressure, at temperature higher than 300 C, depending on reaction conditions in changing composition: CO, H, phenol-aromatic and aliphatic hydro-carbonic.

Special protective equipment and precautions for firefighters

Fire fighters should be equipped with NIOSH – Apparatus (SCBA) and full protective clothing.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions

For personal protection see section 8.

Environmental Precautions

For environmental precautions see section 7.

Methods for cleaning up

For methods of cleaning up see section 7.

Other information

Comply with all applicable federal, state, and local regulations.

7. HANDLING AND STORAGE

Handling

Avoid generating dust from this product. Clean up using methods that do not generate dust such as a HEPA vacuum or wet clean up. Avoid pneumatic removal of dust. If dust is generated, use a NIOSH approved respirator. Minimize dust generation and accumulation, dust removing by suitable industrial vacuum cleaner or central exhausting.

Storage

Store in a dry ventilated storeroom. Do not store together with corrosive substances.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure guidelines

Barium sulfate (7727-43-7)
ACGIH: 10 mg/m3 TWA
OSHA: 10 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction).
NIOSH: 10 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable dust).

Graphite (7782-42-5)
ACGIH: 2 mg/m3 TWA (respirable fraction, all forms except graphite fibers)
OSHA: 2.5mg/m3 TWA (respirable dust).
NIOSH: 2.5mg/m3 TWA (respirable dust).

Mica (12001-26-2)
ACGIH: 3mg/m3 TWA (respirable fraction).
OSHA: 3mg/m3 TWA (respirable dust, less than 1% crystalline silica)
NIOSH: 10 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable dust).

Calcium hydroxide (1305-62-0)
ACGIH: 5 mg/m3 TWA
OSHA: 5 mg/m3 TWA (not in effect as a result of reconsideration)
NIOSH: 5 mg/m3 TWA

Copper (7440-50-8)
ACGIH: 0.2 mg/m3 TWA (fume); 1mg/m3 TWA (dusts and mists, as Cu)
OSHA: 0.1mg/m3 TWA (fume, dusts, mists, as Cu)
NIOSH: 1mg/m3 TWA (dusts and mists); 0.1mg/m3 TWA (fume)

Exposure limits for Particulates not otherwise regulated (Nuisance dust)

OSHA: PEL: 15mg/m3 total dust; 5 mg/m3 respirable fraction
ACGIH: TLV: 10mg/m3 total dust; 3 mg/m3 respirable fraction

Eye protection

Not required under normal conditions of use.

General Measures for Protection and Hygienic

Don't eat, drink or smoke while working.

Hand Protection

Wash thoroughly after handling

Body Protection

Wear light protecting clothes

Respiratory Protection

Use NIOSH-approved respirator if exposure to dust in concentrations exceeding PEL's or TLV's is possible

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Color	Grey
Odor	No characteristic
Density @20ºC	2.4 g/cm³
Solubility	Practically insoluble in water
pH @20ºC	11

10. STABILITY AND REACTIVITY

Substances to be avoided

See section 7

Chemical Stability

The product is stable under normal ambient temperature and pressure

Hazardous Decomposition Products

At temperature> 300ºC depending on reaction conditions in changing composition: CO, H, phenol-aromatic and aliphatic hydro-carbonic.

Possibility of Hazardous Reactions

No data available

11. TOXICOLOGICAL INFORMATION

Component carcinogenicity

Antimony sulfide (1345-04-6)
IARC: Monograph 47, 1989 (Group 3 (not classifiable)
Para- Aramid fibrils (24938-64-5)
ACGIH: Monograph 68, 1997(Group 3 (not classifiable)

Acute toxicity

Calcium hydroxide (1305-62-0)
Oral LD50 Rat: 7430 mg/kg Oral
LD50 Mouse: 7300 mg/kg

12. ECOLOGICAL INFORMATION

Aquatic toxicity (Acute)

Not available

Terrestrial Toxicity

No hazard

Chemical Fate Information

Not available

Biodegradability

Not available

Component Analysis – Eco toxicity – Aquatic Toxicity

Copper (7440-50-8)

Test & Species
96 Hr LC50 fathead minnow 23 ug/L
96 Hr LC50 rainbow trout 13.8 ug/L
96 Hr. LC50 bluegill 236 ug/L
72 Hr. EC50 freshwater algae 120 ug/L (Scenedesmus subspicatus)
96 Hr. LC50 water flea 10 ug/L
96 Hr LC50 water flea 200ug/L

Component Analysis

This material contains one or more of the following chemicals required to be identified. Under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and /or CERCLA (40 CFR 302.4).

Copper (7440-50-8)

CERCLA: 5000Ib final RQ (no reporting of this hazardous substance is required if the diameter of the pieces of the solid metal released is equal to or exceeds 0.004 inches);

2270 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is equal to or exceeds 0.004 inches).

13. DISPOSAL CONSIDERATIONS

Waste disposal

Disposal should be in accordance with applicable regional national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

Recommendation

Recover or recycle if possible

14. TRANSPORT INFORMATION

Regulation

Non – regulated by DOT, TDGR, ICAO/IATA, and IMDG

15. REGULATORY INFORMATION

Inventory status

United States (TSCA): Para-Aramid fibrils (24938-64-5) is not on the TSCA listing. All other ingredients are on the inventory or exempt from listing.

Canada: Para-Aramid fibrils (24938-64-5) is not on the DSL listing or NDSL listing, Cashew dust (68602-89-1) is on the NDSL listing , and all other ingredients are on the DSL inventory or exempt from listing.

Other regulations, limitations and prohibitions

SARA Title Rules	Sections 311/312 Hazard Classes
Fire hazard	no hazard
Reactive hazard	no hazard
Release of pressure	no hazard
Acute Health Hazard	no hazard
Chronic Health Hazard	no hazard

16. OTHER INFORMATION

Information presented herein has been compiled from information provided to us by our suppliers and other sources considered to be dependable and is accurate and reliable to the best of our knowledge and belief but is not guaranteed to be so. Nothing herein is to be construed as recommending any practice or the use of any product in violation of any patent or in violation of any law or regulation. It is the users' responsibility to determine the suitability of any material for a specific purpose and to adopt such safety precautions as may be necessary. We make no warranty as to the results to be obtained in using any material and, since conditions are not under the control, we must necessarily disclaim all liability with respect to the use of any material supplied by us.